

REMARKS

Claims 4, 9, 21-31, and 33-36 are pending in the application, of which claims 4, 9, and 36 have been allowed. Claim 23 is objected to. Claims 21, 24, 29, 33, and 35 are amended. Reconsideration and allowance of all the pending claims are respectfully requested.

The above listed amendments to claims 21, 24, 29, 33, and 35 are provided in the proper form for a reissue application. These claims are reproduced below to show the changes introduced in this paper.

21. (Currently Amended) A method of surgery comprising:
forming partially hemispherical surfaces in endplates of confronting vertebral bodies, the partially hemispherical surfaces being different from a natural surface of the endplates; and
inserting between the formed partially hemispherical surfaces an intervertebral disc prosthesis comprising confronting supports, each support having a partially hemispherical exterior surface adapted to mate with one of the formed partially hemispherical surfaces, wherein the supports are capable of movement relative to each other after the prosthesis has been inserted between the formed partially hemispherical surfaces.

24. (Currently Amended) A method for inserting an intervertebral disc prosthesis having a first and second surface, the method comprising:
after removal of an intervertebral disc, forming a first indentation in a first endplate of a first vertebral body, the first indentation having a middle portion and a circumferential rim such that the middle portion is deeper into the first vertebral body than any part of the circumferential rim;
fixedly mating the first surface to the first indentation of the first endplate of the first vertebral body, the first surface having a shape that conforms to the first indentation; and
fixedly mating the second surface to a second vertebral body.

29. (Currently Amended) A method of surgery comprising:
forming a first artificial surface in an endplate of a first vertebral body, the first artificial surface being arcuate in multiple planes;
inserting a motion-preserving disc prosthesis into an intervertebral space adjacent to the formed first arcuate surface; and
positioning a first portion of the inserted prosthesis against the formed first surface of the first vertebral body, wherein the first portion has an exterior configuration adapted to mate with the formed first surface.

33. (Currently Amended) A method of surgery comprising:
attaching a milling jig to a vertebral body;
milling an endplate of the vertebral body to a relatively shallow thickness as compared to an overall thickness of the vertebral body, with a concave shape of the milled endplate having a depth less than its width and forming a surface different from a natural surface of the endplate;

and

positioning a motion-preserving implant into a disc space adjacent the milled endplate, the implant have a surface that conforms to the milled endplate.

35. (Currently amended) A method of surgery comprising:
removing a spinal disc between confronting vertebral bodies;
forming concave surfaces in the endplates of the confronting vertebral bodies, and
inserting between the formed concave surfaces an intervertebral disc endoprosthesis,
comprising:
(1) confronting concaval-convex supports, each support having an exterior convex surface adapted to mate with one of the formed concave surfaces, and
(2) a resilient body element interposed between the concaval-convex supports.

Support for the amendments can be found in the original disclosure at least at page 11, paragraphs 45 and 46.

Rejection Under 35 U.S.C. § 102

Claims 21, 24, 26-30, and 35 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 4,863,477 to "Monson" and as being anticipated by U.S. Patent No. 5,674,294 to Bainville et al. ("Bainville"). Applicants note with appreciation the phone call from Examiner Stewart on March 13, 2006 to Applicants' representative, David O'Dell. During that call, Examiner Stewart noted that when the natural disc is removed before a prior art prosthesis, such as that disclosed in the Monson reference, is implanted, the natural shape of the endplate may be convex. The Examiner then suggested that the term "artificial" be added to the "forming" steps of the claims. In response, Applicants have amended claims 21, 24, 29, 33, and 35 to describe that the "forming" step is more than removing the natural disc. Neither Monson nor Bainville disclose such features.

Claims 26-28 and 30 depend from independent claims 24 and 29. Accordingly, these claims should be allowable for at least the reasons that the independent claims should be allowable. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections and allow these claims.

Rejection Under 35 U.S.C. § 103

Claims 22, 25, and 31-34 were rejected under 35 U.S.C. § 103 as being unpatentable over Bainville. Claim 32 was previously cancelled. Claims 22, 25, and 31 depend from independent claims 21, 24, and 29. Accordingly, these claims should be allowable for at least the reasons discussed above. Applicants have amended claim 33 to describe that the "forming" step is more than removing the natural disc. Bainville does not teach or suggest such features.

Bainville teaches removing a placing an intervertebral disk having a convex wall adjacent to vertebrae. See Bainville, column 3, lines 18-25. But placing an intervertebral disk does not teach or suggest many of the features of independent claim 33. For example, placing an intervertebral disk does not suggest "attaching a milling jig to a vertebral body," does not suggest "milling an endplate of the vertebral body," and does not suggest "forming a surface different from a natural surface of the endplate." Contrary to the Office Action assertions, there is nothing in Bainville that teaches or suggests milling. Applicants respectfully request that the Examiner withdraw the rejection and allow these claims.

Claim 34 depends from independent claim 33. Accordingly, claim 34 should be allowable for at least the reasons that independent claim 33 should be allowable. Accordingly, Applicants respectfully request that the Examiner allow these claims.

Conclusion

No new matter has been added by this response. Each of claims 4, 9, 21-31, and 33-36 are in a condition for allowance. Applicants respectfully request prompt allowance of the pending claims.

The Examiner is invited to telephone the undersigned at 972-739-6969 if further assistance is necessary. Deposit account number 08-1394 can be used for any over payments, under payments or any required fees including claim fees or extension.

Respectfully submitted,



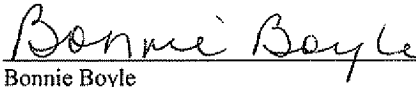
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